

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for maintaining synchronization and power control of wireless signals sent between wireless gateways comprising:

transmitting, from a subscriber access unit to a base station processor, an idle mode signal for maintaining an idle mode connection therebetween, the idle mode signal providing synchronization with the base station processor without actively sending data thereto;

receiving the idle mode signal at the base station processor, the idle mode signal having a power level associated therewith;

determining, by a power level detector in the base station processor, the power level of the idle mode signal;

transmitting, to the subscriber access unit, a power control ~~message~~ bit indicative of a change to the power level of successive idle mode signals;

computing, at the subscriber access unit, a new power level corresponding to the power control ~~message~~ bit;

adjusting, at the subscriber access unit, the transmission power according to the new power level; and

transmitting a successive idle mode signal from the subscriber access unit to the base station processor at the new power level, the subscriber access unit and the base station processor maintaining the idling mode connection at the power

level corresponding to ~~of~~ the power control ~~message~~ bit.

2. (Previously Presented) The method of claim 1 wherein the idle mode signals are sent at predetermined intervals.

3. (Original) The method of claim 2 wherein the predetermined intervals are time slots.

4. (Previously Presented) The method of claim 3 wherein a plurality of a predetermined number of time slots comprises a power control group.

5. (Previously Presented) The method of claim 3 wherein each time slot corresponds to a particular subscriber access unit.

6. (Currently Amended) The method of claim 5 wherein the power control ~~message~~ bit is sent to the subscriber access unit corresponding to the time slot of the idle mode signal.

7. (Currently Amended) The method of claim 6 wherein a power control metric determines the power level corresponding to ~~of~~ the power control ~~message~~ bit.

8. (Cancelled)

9. (Currently Amended) The method of claim 1 wherein the power control ~~bit message further comprises a power control bit indicative of~~ indicates a change in the power level for successive idle mode signals.

10. (Previously Presented) The method of claim 1 wherein computing the new power level further comprises determining which of a plurality of directional antenna elements the idle mode signal was sent from.

11. (Currently Amended) The method of claim 10 wherein the power control ~~bit message further comprises a pattern control bit indicative of~~ indicates which of a plurality of antenna patterns is to be used for successive transmissions.

12. (Currently Amended) The method of claim 1 wherein the idle mode signals are sent on a reverse link and the power control ~~messages~~ bits are sent on a forward link.

13. (Cancelled)

14. (Currently Amended) The method of claim 1 wherein the power control ~~message~~ bit is sent two time slots after the corresponding idle mode signal.

15. (Currently Amended) The method of claim 1 wherein the power control ~~message~~ bit is operable for maintaining a code phase lock.

16. (Previously Presented) The method of claim 2 wherein the predetermined intervals further comprise a minimal duration required to maintain

power control.

17. (Original) The method of claim 16 wherein the minimal duration corresponds to an acceptable power control error.

18. (Currently Amended) A system for maintaining synchronization and power control of wireless signals sent between wireless gateways comprising:

- a base station processor;
- at least one subscriber access unit operable to send an idle mode signal for maintaining an idle mode connection with said base station processor, the idle mode signal providing synchronization with the base station processor without actively sending data thereto;
- a transceiver at the base station processor operable to receive the idle mode signal;
- a power level detector in the base station processor operable to determine a power level of the idle mode signal;
- a link quality controller in the base station processor operable to compute, based on the power level, a power control ~~message~~ bit indicative of a change to the power level of successive idle mode signals;
- a transceiver in the base station processor operable to transmit the power control ~~message~~ bit to the at least one subscriber access unit; and
- the at least one subscriber access unit operable to compute a new power level corresponding to the power control ~~message~~ bit, and further operable to transmit a successive idle mode signal to the base station processor for maintaining the idling mode connection at the power level corresponding to ~~of~~ the power control

message bit.

19. (Previously Presented) The system of claim 18 wherein the at least one subscriber access unit is further operable to send the idle mode signals at predetermined intervals.

20. (Original) The system of claim 19 wherein the predetermined intervals are time slots.

21. (Previously Presented) The system of claim 20 wherein a plurality of a predetermined number of time slots comprises a power control group.

22. (Previously Presented) The system of claim 21 wherein the predetermined number of time slots is 16.

23. (Previously Presented) The system of claim 19 wherein each time slot corresponds to a particular subscriber access unit.

24. (Currently Amended) The system of claim 23 wherein the base station processor is further operable to send the power control ~~message~~ bit to the at least one subscriber access unit corresponding to the time slot of the idle mode signal.

25. (Currently Amended) The system of claim 18 wherein the power control bit ~~message further comprises a power control bit indicative of~~ indicates a

change in the power level for successive idle mode signals.

26. (Previously Presented) The system of claim 18 further comprising a directional antenna having a plurality of elements, wherein the base station processor is further operable to determine the new power level by determining which of the elements the idle mode signal was sent from.

27. (Currently Amended) The system of claim 26 wherein the power control ~~bit message further comprises a pattern control bit indicative of~~ indicates which of the plurality of elements is to be used for successive transmissions.

28. (Currently Amended) The system of claim 18 further comprising a reverse link and a forward link, wherein the idle mode signals are sent on a reverse link and the power control ~~messages~~ bits are sent on a forward link.

29. (Currently Amended) The system of claim 18 wherein the base station processor is operable to send the power control ~~message~~ bit two time slots after the corresponding idle mode signal.

30. (Currently Amended) A subscriber unit comprising:
a wireless transceiver for providing wireless communications of digital signals over a digital communications path, and transmitting an idle mode signal having a power level associated therewith for maintaining an idle mode connection over the digital communications path without actively sending data, said wireless transceiver for

receiving over the digital communications path a power control ~~message~~ bit indicative of a change to the power level of successive idle mode signals,

computing a new power level corresponding to the power control ~~message~~ bit,

adjusting the transmission power according to the new power level, and

transmitting a successive idle mode signal at the new power level for maintaining the idling mode connection at the power level corresponding to ~~of~~ the power control ~~message~~ bit.

31. (Previously Presented) A subscriber unit according to Claim 30 wherein the idle mode signals are sent at predetermined intervals.

32. (Previously Presented) A subscriber unit according to Claim 31 wherein the predetermined intervals are time slots.

33. (Previously Presented) A subscriber unit according to Claim 32 wherein a plurality of time slots comprises a power control group.

34. (Previously Presented) A subscriber unit according to Claim 32 wherein each time slot corresponds to a particular subscriber unit.

35. (Currently Amended) A subscriber unit according to Claim 34 wherein the power control ~~message~~ bit is sent to the subscriber unit corresponding

to the time slot of the idle mode signal.

36. (Currently Amended) A subscriber unit according to Claim 35 wherein a power control metric determines the power level corresponding to ~~of~~ the power control ~~message~~ bit.

37. (Cancelled)

38. (Currently Amended) A subscriber unit according to Claim 30 wherein the power control bit ~~message comprises a power control bit indicative of~~ indicates a change in the power level for successive idle mode signals.

39. (Currently Amended) A subscriber unit according to Claim 30 wherein the power control ~~message~~ bit is received two time slots after the corresponding idle mode signal.

40. (Previously Presented) A subscriber unit according to Claim 31 wherein the predetermined intervals further comprise a minimal duration required to maintain power control.

41. (Previously Presented) A subscriber unit according to Claim 40 wherein the minimal duration corresponds to an acceptable power control error.

42. (New) A subscriber unit comprising:

a wireless transceiver configured to provide wireless communications of digital signals over a digital communications path in a wireless CDMA system;
and

a bandwidth manager coupled to the wireless transceiver and configured to receive over the digital communications path a power control bit from a remote wireless transceiver, and to compute a power level corresponding to the power control bit for a gated idle mode signal to be transmitted by the wireless transceiver;

the wireless transceiver configured to transmit the gated idle mode signal to the remote wireless transceiver during an idle mode connection wherein the wireless transceiver is powered on but not actively sending data so that power control is maintained at the computed power level.

43. (New) A subscriber unit according to Claim 42 wherein the wireless transceiver transmits the gated idle mode signal at predetermined intervals.

44. (New) A subscriber unit according to Claim 43 wherein the predetermined intervals are time slots.

45. (New) A subscriber unit according to Claim 44 wherein each time slot corresponds to a plurality of power control groups.

46. (New) A subscriber unit according to Claim 42 wherein a power control metric corresponds to the power level of the power control bit.

47. (New) A subscriber unit according to Claim 42 wherein the power control bit indicates a change in the power level for a subsequent gated idle mode signal.

48. (New) A subscriber unit according to Claim 42 wherein the power control bit is received two time slots after the corresponding gated idle mode signal.

49. (New) A subscriber unit according to Claim 43 wherein the predetermined intervals are based upon a minimal duration required to maintain power control.

50. (New) A subscriber unit according to Claim 49 wherein the minimal duration corresponds to an acceptable power control error.

51. (New) A code division multiple access (CDMA) user device comprising:

a wireless transceiver configured to provide wireless communications of digital signals over a digital communications path in a wireless CDMA system, including transmission of a synchronization signal to establish a communications session with a CDMA base station; and

the bandwidth manager coupled to said wireless transceiver and configured to receive over the digital communications path a power control bit from the CDMA base station, and compute a power level corresponding to the power control bit, and utilize allocated subchannels on an as needed basis when the wireless transceiver is to transmit data;

the wireless transceiver configured to transmit a gated idle mode signal to the CDMA base station during an idle mode connection wherein the wireless transceiver is powered on but not actively sending data so that power control is maintained at the computed power level.

52. (New) A CDMA user device according to Claim 51 wherein the wireless transceiver transmits the gated idle mode signal at predetermined intervals.

53. (New) A CDMA user device according to Claim 52 wherein the predetermined intervals are time slots.

54. (New) A CDMA user device according to Claim 53 wherein each time slot corresponds to a plurality of power control groups.

55. (New) A CDMA user device according to Claim 51 wherein a power control metric corresponds to the power level of the power control bit.

56. (New) A CDMA user device according to Claim 51 wherein the power control bit indicates a change in the power level for a subsequent gated idle mode signal.

57. (New) A CDMA user device according to Claim 51 wherein the power control bit is received two time slots after the corresponding gated idle mode signal.

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58. (New) A CDMA user device according to Claim 51
wherein the predetermined intervals are based upon a minimal duration required to
maintain power control.

59. (New) A CDMA user device according to Claim 58
wherein the minimal duration corresponds to an acceptable power control error.